

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number  
**WO 2005/004532 A1**

(51) International Patent Classification<sup>7</sup>: **H04R 3/00**, 1/40

(21) International Application Number:

PCT/EP2004/007110

(22) International Filing Date: 30 June 2004 (30.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03014846.4 30 June 2003 (30.06.2003) EP

(71) Applicant (for all designated States except US): **HAR-  
MAN BECKER AUTOMOTIVE SYSTEMS GMBH**  
[DE/DE]; Becker-Goering-Strasse 16, 76307 Karlsbad  
(DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **CHRISTOPH,  
Markus** [DE/DE]; Danziger Strasse 46, 94315 Straubing  
(DE).

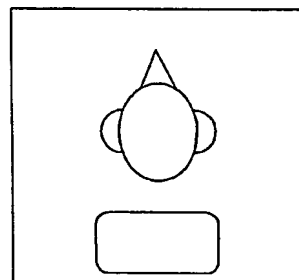
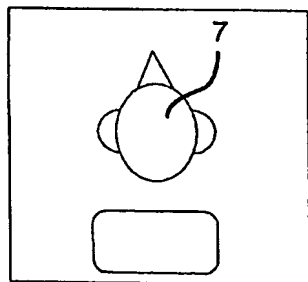
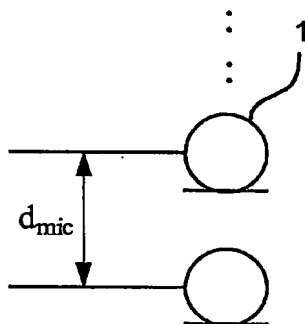
(74) Agent: **WEIGELT, Udo**; Grünecker, Kinkeldey, Stock-  
mair & Schwanhäusser, Maximilianstrasse 58, 80538  
München (DE).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: HANDSFREE SYSTEM FOR USE IN A VEHICLE



(57) Abstract: The invention is directed to a handsfree system for use in a vehicle comprising a microphone array with at least two microphones and a signal processing means wherein the signal processing means comprises the superdirective beamformer with fixed superdirective filters.



**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*